

## Surfing on the Wearable Tech: challenges for social participation

Sonia Lara  
Concepción Naval  
University of Navarra  
Pamplona, SPAIN  
slara@unav.es  
cnaval@unav.es

**Abstract:** It is a fact that wearable technologies are ubiquitous among young and not-so-young citizens. These gadgets provide the connection to apps what are characterized as having a great potential for fostering socialization and the sense of belonging to a community; nevertheless, there exist contrary research results concerning whether or not they are influencing the development of greater civic involvement in a real way. In this paper we analyze this question in the light of the educational challenges that are presented by social networks as promoters of social participation.

"If you'd told me in 1995 that I would have a device in my pocket that gave me access to all the world's information and let me communicate with anyone I knew at a moment's notice ... I would have been dumbfounded. And now I complain because it doesn't do those things fast enough!"<sup>1</sup> Aaron Smith (Senior Researcher, Pew Research Center's Internet Project)

### *Surfing on the Wearable Technologies*

Wearable technology is related to both the field of ubiquitous computing and the history and development of wearable computers. With ubiquitous computing, wearable technology share the vision of interweaving technology into the everyday life, of making technology pervasive and interaction friction less. Through the history and development of wearable computing, this vision has been both contrasted and affirmed. Affirmed through the multiple projects directed at either enhancing or extending functionality of clothing, and as contrast, most notably through Steve Mann's concept of surveillance. The history of wearable technology is influenced by both of these responses to the vision of ubiquitous computing. According to ABI Research due to the relative ease of compatibility with smartphones and other electronic devices, the wearable technologies market will spike to 485 million annual device shipments by 2018 (en.wikipedia.org). The intense and extended uses of this technologies challenge (and force to *surf*) to the knowledge society in at least four ways:

First, a number of recent studies have described the increasing use of social networks among the young and not-so-young-citizens (cf. among others: Bringue and Sadaba, 2009, Davies and Cranston, 2008, DCLG, 2008, Ofcom, 2008, 2009, 2010, 2012, 2013; Smith et al., 2009, Sylvester and McGlynn, 2009, Taylor and Keeter, 2010; WildBit, 2005). These studies note the great potential of these media to promote socialization and a sense of membership to a community. Although solid empirical evidence is lacking, there are indications that these media strongly influence the development of greater civic involvement (cf. among others: Boulianne, 2009, Jenkins et al., 2009, Jennings and Zetner, 2003, Lara and Naval, 2012, Smith et al., 2009; Smith, 2013).

The majority of young people use these networks to communicate and share contents, behaviors which are promoting a participative culture, as Jenkins and cols. (2006) term it (cfr. Lara and Naval, 2012). They define it as a culture with few barriers which promotes artistic expression and civic commitment, which supports the creation of personally-authored content in order to share it, which has some kind of informal mentorship of novices by more experienced members, which makes the members of this culture believe that their contributions matter, and where the participants have a certain degree of social connection among themselves (or at least, are aware of what others think of what one has created). Forms of this participative culture include:

<sup>1</sup> Survey finds Americans largely optimistic about science. USA Today, 17 April 2014  
[<http://www.usatoday.com/story/tech/2014/04/17/pew-views-science/7778869/>]

- affiliations: memberships, formal and informal in SNSs;
- expressions: producing new creative forms;
- collaborative problem-solving: working together in teams, formal and informal, to complete tasks and develop new knowledge;
- circulations: shaping the flow of media.

These manifestations of participative culture can be summarized under two headings (Lara and Naval, 2010). Those behaviors which encourage us to *communicate*, express ourselves and make others participants in what we think and do. And those which encourage us to *collaborate (action)* with others in the startup of projects, the resolution of problems, the defense of an idea, etc. From the point of view of social participation and civic commitment this latter is of especial interest. It is worth seeking to discover to what point online social networks are or are not fostering greater social participation, in comparison with traditional forms of offline participation.

Second, the new demands facing the citizens of our society are considered in comparison with those of the past (cf. Trilling and Fadel, 2009, 14-15). In the Agrarian Society, civic responsibilities were essentially limited to helping neighbors and contributing to local and community needs. The Industrial Society began to recognize the need for participation in social and civic organizations in order to benefit the community, stimulate involvement in political and labor activities, and to contribute to development through participation in local and regional activities, voluntary or philanthropic. In modern times, the Knowledge Society has discovered a new means of participating and making decisions in social and political life that complements the traditional participation in person, via the Internet. It has become common to engage in global issues through online communities or social networks, and to contribute to local and global causes. The new social responsibilities are effectively summarized by Bennett (2008), who describes the actualizing citizenship, as compared to the *traditional* dutiful *citizenship*. This new form of citizenship to a large extent characterizes young people and it is broadly defined by participation in political issues motivated by personal interests, as reflected by: specific forms of consumerism to affirm or protest against the values or goals promoted by an organization or company; participation in various voluntary activities; greater participation in various online communities or social networks than physical participation; a lack of interest, or at least a lack of appreciation of the vote as the supreme form of civic participation.

Third, with the explosion of the social networks, which blur the boundaries between the editors and readers of content and opinion on the Internet, any owner can use these media to disseminate their ideas, projects or interests. The specific characteristics of social networks offer a new form of communication. Unlike real-life face-to-face communication, in relation to what can be transmitted and participated on the network (Boyd, 2007, 2014). As such: it endures, and persists in time; it can be repeated as often as desired; it is easily found through search engines; it can be replicated and reproduced in different locations on the net, losing control of dissemination of the content; and finally, as a result of the above its public is an invisible audience that it is almost impossible to control and to understand. This peculiar form of communication is particularly attractive to train the skills/competences of individuals who will participate in this globalized world, and it is available to anyone to disseminate or propose projects, either locally and globally.

Fourth, within the compulsory basic training and educational systems of several countries, essential knowledge, skills and attitudes have been introduced into the official curriculum that foster and develop more involved and active citizens, committed to the development of society, without losing sight of the global consciousness of the world in which we live. However, we can look to the case of Europe in relation to competences, and to that of the US in relation to skills. In the case of the former, the European Parliament published a series of Recommendations (2006) for member states to include a set of core competences in education systems to be developed until the end of compulsory education. Included among these are social and civic competences. In the US, the Partnership for 21st Century Skills (2002, 2009) proposes an educational model for the new millennium covering the skills required of citizens in the 21st century, and cites civic literacy as one of the skills that should be developed through primary and secondary education.

## Social Participation

One of the key debates in teaching and learning citizenship is, precisely, the use of ICT: does it help or hinder? What do we do with it? In what ways can ICT be used to build UP powerful impact resources to engage young people with citizenship issues? What does it mean to be good at ICT as a citizen? On the other hand, there is

no doubt that the future of democracy is closely related to ICT, specifically to the use of Internet to promote more active citizen participation: greater civic, social and political participation, which is at the core of democracy.

When we speak of participation we are touching on a central question in the framework of a democracy (Forbrig, 2005; Macedo et al., 2005; Saha, Print, Edwards, 2007). The political formation of the citizen, in the Greek sense of the term--being able to assume responsibilities in social life--has been one of the concerns of education since ancient times. Nevertheless, more recently, with the exaltation of the individual this focus has become very problematic. Today we live in some sense in a "society of individuals", in which the social dimension of the person has been losing its value as a source of meaning for life (Lara and Naval, 2010). The modern individual acts by giving priority to his or her private aspirations and experiences. Indeed, some authors have spoken of the existence of a dead or empty public space in our society (Sennett, 1978; Naval, 2000, 2003).

Many social networks have been attributed considerable potential for fostering socialization and membership of a community. However, there are contradictory research results as to whether or not they are really influencing the development of greater civic participation. We find evidence contrary to this hypothesis in the meta-analysis conducted by Boulianne (2009), which maintains that the use of the internet has a negative effect on civic participation due to the amount of time spent online in detriment to the time employed offline (Lara and Naval, 2010). However, there is no evidence that the Internet has a positive and substantial impact on this commitment. In relation to this, all generations have the perception that social networks have a very positive influence in fostering relationships. At least the popular perception and belief is that these networks serve to unite more than to isolate people (Ofcom, 2010; Taylor & Keeter, 2010).

In the studies conducted by Ofcom (2008, 2009, 2010, 2013) on the United Kingdom population over the age of 16, and Pew (Smith et al., 2009, Smith, 2013) on the US population, we can see that the people who involve themselves most in public life are middle-aged citizens (40-60 years) with a high socio-economic and educational level. By contrast, the population that participates least consists of young people with a low socio-economic and educational level, and with few qualifications.

As with the Ofcom report (2009, 2013), the Pew study (Smith et al., 2009; Smith, 2013) offers some clues which indicate that the use of blogs or SNS could perhaps change the belief that socio-economic status is a decisive factor for participation. Thus, 33% of Internet users have their profile on an SNS and 31% of them are committed to some form of civic or political activity (joining a political party, including a politician as a "friend", etc.). This data leads us to believe that it is not inevitable that people with higher income levels are the ones who are most committed to civic and/or political issues. We should not forget that it is young people who are the most involved in online activities such as blogs and SNS (37% aged 18-29 years), rather than adults (17% aged 30-49; 12 % aged 50-64; 10% over 65), and that the data shows that civically committed blog and SNS users are more active in offline situations when compared with other Internet users.

The impact that these new tools may have on the future of online politics will largely depend on how our new young people behave. Thus, Smith et al. (2009) ask themselves whether we are witnessing a generational change that will affect how young people behave, or whether new technologies will continue to leave people with lower incomes and levels of education behind.

## **Final Thoughts**

Although the data is not conclusive, there are indications that Internet access is partly responsible for permitting greater participation by facilitating and promoting activities that ensure a citizens' voice is heard, and partially overcoming socio-economic and educational barriers. A preliminary difficulty which is important to take into account, although we can not go into detail here, resides in the terminology which is used in the bibliography, and also in the speed of change in this area, particularly in the technology.

Why should we address this issue? There are various reasons which encourage us to do so. Mainly because it is a contemporary topic which is not merely technical but is obviously rooted in education and poses a clear challenge to our world. But also, because some Reports show modest signs that the use of the internet could be another means of promoting participation both online and offline.

We propose three lines of action from an educational point of view, which are not incompatible with one another.

Firstly, the promotion of service-learning activities linked to the immediate environment of young people. Bennett (2008) recommends that *educators* should promote participation related to the community in which they live. In general terms, the implementation of service-learning programmes appears to yield positive results for students, teachers, parents and the local community. The greatest challenge to their implementation is the limited involvement of some students in their development. The vital role played by teaching staff in the successful development of these programmes must also be considered.

Secondly, awareness should be raised amongst citizens of the possibilities afforded by the Internet for participation in social and political civic life: “There is a general consensus among respondents that the internet has made it easier to engage in citizen participation activities. However, even among the online user sample, a significant minority (31%) are unaware of online citizen participation opportunities. In areas of multiple deprivation this rises to 72%, suggesting that increased awareness would lead to more people engaging in digital participation. Building awareness of what it is possible to do quickly and easily online could encourage greater participation” (Ofcom, 2009).

Thirdly, the use of participatory media should be encouraged. Rheingold (2008, p. 100) includes blogs, wikis, RSS, tagging and social bookmarking, music-photo-video sharing, podcasts, digital storytelling, virtual communities, SNS, virtual environments and videoblogs as participatory media. All of these highly diverse media have three features in common: a) they enable anyone to use the Internet to become an editor and consumer of information (text, images, audio, video, software, data, discussions, tags, links with other people); b) they allow us to bring people together to form an audience or a market; and c) they facilitate the task of coordinating activities rapidly and cheaply. Rheingold does not regard the use of these media as a solution to disengagement from political life but rather, as a useful tool to help people to commit themselves. The data presented above partially support this idea (Ofcom, 2009, 2010, 2013; Smith et al., 2009; Smith, 2013; Lara and Naval, 2012), and there are even some studies and experiences that identify good practices in employing these participatory media to achieve greater political and social commitment on the part of young people (Bachen, Raphael, Lynn, McKee & Philippi, 2008; CivicWeb, 2009; Lara and Naval, 2009, 2010; Montgomery, Gottlieb-Robles and Larson, 2004; Raynes-Goldie and Walker, 2008; Rheingold, 2008).

Finally, we wish to stress that the work described here enables us to define the role of wearable technologies in the development of civic participation, highlighting specific aspects that will permit a conceptual framework to be built in the future. Our intention has been to analyse this issue as a first step in the process. In conclusion, we believe in a position of cautious optimism regarding the renovation of civic and political participation, thanks to wearable technologies.

## References

- Bachen, C., Raphael, Ch., Lynn, K.M., McKee, K. and Philippi, J. (2008). Civic Engagement, Pedagogy, and Information Technology on Web Sites for Youth. *Political Communication*, 25 (3), 290–310.
- Bennett, W. L. (2008). Changing Citizenship in the Digital Age. In W. Lance Bennett (Ed.), *Civic Life Online: Learning How Digital Media Can Engage Youth* (pp. 1–24). Cambridge, MA: The MIT Press. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning.
- Boulianne, S. (2009). Does Internet Use Affect Engagement? A Meta-Analysis of Research. *Political Communication*, 26 (2), pp. 193-211.
- Boyd, D. (2007). Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life. In D. Buckingham (Ed). *Youth, Identity, and Digital Media Volume*. MacArthur Foundation Series on Digital Learning. MIT Press: Cambridge, MA.
- Boyd, D. (2014). *It's Complicated: The Social Lives of Networked Teens*. Yale University Press: New Haven, CT
- Bringué, X. and Sádaba, Ch. (2009). *La generación interactiva en España. Niños y adolescentes ante las pantallas*. Ariel. Colección Fundación Telefónica: Madrid. [http://www.generacionesinteractivas.org/?page\\_id=1678](http://www.generacionesinteractivas.org/?page_id=1678)
- Davies, T. and Cranston, P. (2008, September). *Youth Work and Social Networking. Final Research Report. How can Youth Work best support young people to navigate the risks and make the most of the opportunities of online social networking?* National Youth Agency Information and Research. <http://blog.practicalparticipation.co.uk/wp-content/uploads/2009/08/fullYouth-Work-and-Social-Networking-Final-Report.pdf>
- Department for Communities and Local Government (2008, October). *Online Social Networks. Research Report*. Communities and Local Government, UK. <http://www.communities.gov.uk/publications/communities/onesocialnetworks>

- DIARIO OFICIAL DE LA UNIÓN EUROPEA (30-12-2006). Recomendación del Parlamento Europeo y del Consejo de 18 de diciembre de 2006 sobre las competencias clave para el aprendizaje permanente (2006/962/CE)
- Forbrig, J. (Ed.) (2005). *Revisiting Youth Political Participation: Challenges for Research and Democracy Practice in Europe*. Strasbourg. Council of Europe.
- <http://www.p21.org/documents/ProfDev.pdf> (accessed November 15, 2010).
- Jenkins, H., Purushotma, R., Clinton, K. and Robison, A. J. (2009). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. Cambridge, MA: The MIT Press. Retrieved January 30, 2009 from [http://mitpress.mit.edu/books/full\\_pdfs/Confronting\\_the\\_Challenges.pdf](http://mitpress.mit.edu/books/full_pdfs/Confronting_the_Challenges.pdf)
- Jenkins, H.; Purushotma, R.; Clinton, K.; Weigel, M. and Robison, A.L. (2006). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. MacArthur Foundation.
- Jenning, M. K. & Zeitner, V. (2003). Internet use and civic engagement. A longitudinal analysis. *Public Opinion Quarterly*, 67, 311–334.
- Lara, S. and Naval, C. (2009). Educative proposal of web 2.0 for encouragement of social and citizenship competence. In G. Siemens and C. Fulford (Ed.), *World Conference on Educational Multimedia, Hypermedia and Telecommunications 2009* (pp. 47-52). AACE: Chesapeake, VA
- Lara, S. and Naval, C. (2010). Social Network Site Usage and Social Participation. In J. Herrington and B. Hunter (Ed.), *World Conference on Educational Multimedia, Hypermedia and Telecommunications 2010* (pp. 2438-2442). Chesapeake, VA: AACE
- Lara, S. and Naval, C. (2012). Social networks, civic participation and young people. A literature Review and Summary of the educational challenges. In Aroon, M. and Holzer, M. (Eds.), *Active citizen participation in e-government. A global perspective*. Hersey, pA: IGI Global (pp. 197-205).
- Macedo, S. et al. (2005). *Democracy at Risk*. Brookings Institute: Washington D.C.
- Montgomery, K; Gottlieb-Robles, B. and Larson, G. (2004). *Youth as E-Citizens: Engaging the Digital Generation*. Center for Social Media School of Communication American University  
[<http://www.civicyouth.org/PopUps/YouthasECitizens.pdf>]
- Naval, C. (2000). *Educación de ciudadanos*, EUNSA: Pamplona (2ª ed.).
- Naval, C. (2003). Democracia y participación en la escuela, *Anuario Filosófico*, XXXVI/1, pp. 183-204.
- Ofcom (2008). *Social Networking. A quantitative and qualitative research report into attitudes, behaviours and use*. London: Ofcom. Office of Communication. Retrieved July 30, 2010 from [http://www.ofcom.org.uk/advice/media\\_literacy/medlitpub/medlitpubrss/socialnetworking/report.pdf](http://www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrss/socialnetworking/report.pdf)
- Ofcom (2009). *Citizens' Digital Participation: Research Report*. London: Ofcom. Office of Communication. Retrieved July 30, 2010 from <http://stakeholders.ofcom.org.uk/market-data-research/media-literacy/medlitpub/medlitpubrss/cdp/>
- Ofcom (2010). *Digital Participation. 2010 Metrics Bulletin*. London: Ofcom. Office of Communication. Retrieved July 30, 2010 from. <http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/digital-participation/2010-metrics/metrics-bulletin-2010.pdf>
- Ofcom (2013). *Adults' media use and attitudes report 2013*. London: Ofcom. Office of Communication. Retrieved April 20, 2014 from [http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/adult-media-lit-13/2013\\_Adult\\_ML\\_Tracker.pdf](http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/adult-media-lit-13/2013_Adult_ML_Tracker.pdf)
- Partnership for 21st Century Skills (2003, July) *Learning for the 21st Century. A Report and Mile Guide for 21st Century Skills*, Partnership for 21st Century Skills.
- Partnership for 21st Century Skills (2006). *Framework for 21st century learning*.
- Raynes-Goldie, K. and Luke, W. (2008). Our Space: Online Civic Engagement Tools for Youth. In W. Lance Bennett (Ed.), *Civic Life Online: Learning How Digital Media Can Engage Youth* (161–188). Cambridge, MA: The MIT Press. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning.
- Rheingold, H. (2008). Using Participatory Media and Public Voice to Encourage Civic Engagement. In W. Lance Bennett (Ed.), *Civic Life Online: Learning How Digital Media Can Engage Youth* (pp. 97–118). Cambridge, MA: The MIT Press. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning.
- Saha, L. J., Print, M. and Edwards, K. (Eds.) (2007). *Youth and Political Participation*. Rotterdam: Sense Publishers.
- Sennett, R. (1978). *La crisis del hombre público*. Península: Barcelona.
- Smith, A (2013). *Civic Engagement in the Digital Age*. PewInternet and American Life Project, Washington, D.C. Retrieved April 3, 2014 from [http://www.pewinternet.org/files/old-media//Files/Reports/2013/PIP\\_CivicEngagementintheDigitalAge.pdf](http://www.pewinternet.org/files/old-media//Files/Reports/2013/PIP_CivicEngagementintheDigitalAge.pdf)

- Smith, A., Schlozman, K. L., Verba, S. and Brady, H. (2009). The Internet and Civic Engagement. PewInternet and American Life Project, Washington, D.C. Retrieved July 30, 2010 from <http://www.pewinternet.org/~media/Files/Reports/2009/The%20Internet%20and%20Civic%20Engagement.pdf>
- Sylvester, D. E. and McGlynn, A. J. (2009). The Digital Divide, Political Participation, and Place. *Social Science Computer Review*, 28 (1), pp. 64-74.
- Taylor, P. and Keeter, S (Editors) (2010, February). *MILLENNIALS: A Portrait of Generation Next*. Confident. Connected. Open to Change. Pew Research Center. <http://pewsocialtrends.org/assets/pdf/millennials-confident-connected-open-to-change.pdf>
- Trilling, B. and Fadel, C. (2009). *21st century learning skills*. San Francisco, CA: John
- Wildbit (2005, July). *Social Networks Research Report*. Wildbit. <http://tidbit.wildbit.com>